

Site: Syntex Verona
ID #: NOV 10 7452157
Break: 3.3
Other: Syntex
12-19-86

RECEIVED

DEC 24 1986

CMPL SECTION

December 19, 1986

Robert H. Hentges
Chief of Permit Section
Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, MO 65102

Dear Mr. Hentges:

I have received your letter of December 10, 1986 denying permission to treat lightly contaminated rainwater and then land apply this water at the Verona facility. In this letter you stated several concerns about the details of our proposal. These concerns are addressed in this letter and we ask you to reconsider your decision.

One aspect of this project which was omitted from our original proposal is the expected volume of water to be treated. On hand is approximately 15,000 gallons of rainwater which has been collected over the past 2 - 3 years. Future estimates of rainwater to require treatment will be in the range of 5000-8000 gallons per year until the Photolysis system is decommissioned in 1-2 years. It is desired to have an effective, economical, and approved method to treat and dispose of this small but troublesome amount of material. The total volumes of rainwater are minimal and the treatment operation will be intermittent and will prevent unnecessary inventories of subsequent rainwater.

Our intention is to treat by the process submitted in our November 17th proposal 2,000 gallons of rainwater per batch. Due to the logistics of performing each step of the process and due to the time required for obtaining analytical results, 2 batches (4000 gallons total) of rainwater are all that can be reasonably forecast to be completed per week. In our initial submission, the land application rate was set to allow the 2,000 gallons of one batch of treated material to be easily land applied in an 8 hour shift. Of course, it was not planned to land apply the water during rainfall, flooding, or frozen ground conditions.

The soils in the proposed land application area have been sampled and are classified as Huntington soils as described in the Soil Survey of Greene and Lawrence Counties, MO. These soils have a hydraulic conductivity of 0.6 - 2.0 inches/hr which is greater than the anticipated application rate. During the irrigation process, an observer will be charged with the responsibility of preventing runoff. This will be accomplished by stopping flow to the irrigation piping before runoff can occur.



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SUPERFUND RECORDS

Soil sample analyses for TCDD were submitted in the original letter of November 17, 1986. Other analyses concerning chemicals related to the Hexachlorophene process used by NEPACCO can be found in the Final Report of the Verona Sampling and Analytical Plan which was submitted to MDNR on January 7, 1986 and are attached to this letter for your review. Further sampling (post irrigation) is not considered necessary since the water being land applied will be certified free of TCDD at a detection level of 1 ppt. If we assume that TCDD is present at the 1 ppt detection level, it would require over 38,000,000 gallons of water to raise the average soil concentration up 1 ppb to a depth of 6".

Existing groundwater monitoring wells have been installed downstream of the proposed land application area. These wells were installed in accordance with the Verona Sampling and Analysis Plan activities. It has been proposed to sample these wells quarterly for:

pH	Iron (T)
Conductivity	Lead (T)
TOC	Maganese (T)
Chlorides (T)	Selenium (T)
Sulfates (T)	Sodium (T)
Nitrates (T)	Methylene (T)
Phenols (T)	Toluene
Arsenic (T)	Chlorobenzene
Barium (T)	Ethylbenzene
Chromium (T)	1,4-Dichlorobenzene
	Tetrachloroethane.

This information was extracted from the Verona Remedial Alternatives Report submitted to MDNR on 10/4/86. Since the volume of water to be land applied is minimal and the purity is certified free of TCDD, these analyses should be more than adequate to show no effect by the land application of this treated water.

Again, since this is planned to be an intermittent operation, equipment to be used for land application will be simple. A row of plastic pipe will be drilled with small holes and placed in the proper area. It will be manually moveable within the proper area to adequately spread the water to prevent runoff. The positioning and flow through the pipe will be controlled by the previously mentioned observer.

This observer will also be responsible for record keeping. These records will record data from each batch such as the volume of water and the amount of floc materials added, the analytical results, and the observations of the actual land application of the batch. From these records, reports can be generated as required to properly document the activities which transpired.

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As proposed, it will take approximately 4 weeks to successfully treat and land apply the 15,000 gallons of water which has been collected to date. Please expeditiously reconsider your decision denying permission for us to proceed so that we can rectify this situation prior to it blossoming into a larger problem.

Sincerely,

SYNTEX AGRIBUSINESS, INC.



Robert L. Williams
Administrator, Environmental Projects

RLW:rlz/0365A

xc: Ed Sears, MDNR - Springfield, MO
Gary Kepko, EPA - Region VII

12/13/85

Verona Sampling and Analysis Plan

TABLE 5
Multiple Analytes Summary - SOIL

SAMPLE ID NUMBER	SAMPLE DATE	LOCATION	DESCRIPTION	ANALYTICAL LOG NO.	TCB EXTRN DATE	ANALYSIS REF. (TCB:)	1245-TCB (ppb)	(Limit)	PHENOLS EXTRN DATE	ANALYSIS REF. (PHEN:)	245-TCP (ppb)	(Limit)	HEX (ppb)	(Limit)	COMMENTS
106.0000	4/10/85	GRID	COMPOSITE	85ENV086	10/15/85	12-110	ND	(1.4)	10/15/85	13-237	ND	(2.1)	ND	(3.4)	
124.0000	4/11/85	GRID	COMPOSITE	85ENV094	06/20/85	12-001	ND	(2.5)	10/08/85	13-097	ND	(0.3)	30.6		
127.0000	4/11/85	GRID	COMPOSITE	85ENV097	06/20/85	12-001	ND	(1.0)	10/08/85	13-097	ND	(5.2)	ND	(0.3)	
146.0000	4/15/85	GRID	COMPOSITE	85ENV114	07/03/85	12-014	ND	(2.5)	10/08/85	13-097	ND	(4.6)	36.6		
147.0000	4/15/85	GRID	COMPOSITE	85ENV115	07/03/85	12-014	ND	(2.3)	10/08/85	13-097	ND	(5.5)	19.2		
148.0000	4/15/85	GRID	COMPOSITE	85ENV116	07/03/85	12-014	3.2		10/08/85	13-097	ND	(9.0)	239		
153.0000	4/16/85	GRID	COMPOSITE	85ENV121	07/03/85	12-014	ND	(2.6)	10/08/85	13-097	ND	(8.3)	27.1		
156.0000	4/16/85	GRID	COMPOSITE	85ENV124	07/03/85	12-014	ND	(2.3)	10/09/85	13-153	ND	(8.7)	210		
183.0000	4/17/85	GRID	COMPOSITE	85ENV135	07/03/85	12-014	ND	(2.4)	10/09/85	13-153	ND	(6.1)	ND	(23)	
183.0000	4/17/85	GRID	COMPOSITE	85ENV135-D	10/29/85	12-208	ND	(3.5)	10/22/85	13-387	ND	(3.5)	19.5		Duplicate Analysis
183.0000	4/17/85	GRID	COMPOSITE	85ENV135-T	10/31/85	12-233	ND	(1.7)	10/29/85	13-361	ND	(2.1)	45.3		Triplicate Analysis
183.0000	4/17/85	GRID	COMPOSITE	85ENV135-Q	11/11/85	12-244	ND	(1.3)	/ /	/ /	-----	-----	-----	-----	Quadruplicate Analysis
186.0000	4/18/85	GRID	COMPOSITE	85ENV138	07/26/85	12-035	8.4		09/30/85	13-122	50.2		86.8		
186.0000	4/18/85	GRID	COMPOSITE	85ENV138-D	/ /	-----	-----	-----	10/09/85	13-153	48.3		358		Duplicate Analysis
213.0000	4/24/85	GRID	COMPOSITE	85ENV162	07/26/85	12-035	6.7		09/30/85	13-122	40.8		022		
213.0000	4/24/85	GRID	COMPOSITE	85ENV162-D	/ /	-----	-----	-----	10/09/85	13-153	8.8		397		Duplicate Analysis
216.0000	4/24/85	GRID	COMPOSITE	85ENV165	07/26/85	12-035	7.0		09/30/85	13-122	ND	(21)	30.3		
216.0000	4/24/85	GRID	COMPOSITE	85ENV165-D	11/11/85	12-244	ND	(1.8)	10/09/85	13-153	ND	(5.2)	94.5		Duplicate Analysis
232.0000		GRID	COMPOSITE		/ /	-----	-----	-----	/ /	/ /	-----	-----	-----	-----	ON CITY PROPERTY
234.0000	4/25/85	GRID	COMPOSITE	85ENV173	07/26/85	12-035	ND	(3.9)	09/30/85	13-122	ND	(26)	ND	(14)	
234.0000	4/25/85	GRID	COMPOSITE	85ENV173-D	11/12/85	12-257	ND	(2.6)	11/12/85	13-463	ND	(1.2)	109		Duplicate Analysis
243.0000	4/26/85	GRID	COMPOSITE	85ENV182	07/26/85	12-051	9.7		09/30/85	13-122	46.0		1270		
243.0000	4/26/85	GRID	COMPOSITE	85ENV182-D	/ /	-----	-----	-----	10/10/85	13-174	47.3		3740		Duplicate Analysis
246.0000	4/25/85	GRID	COMPOSITE	85ENV174	07/26/85	12-035	ND	(3.8)	09/30/85	13-122	ND	(6.0)	ND	(6.6)	
246.0000	4/25/85	GRID	COMPOSITE	85ENV174-D	/ /	-----	-----	-----	10/10/85	13-174	ND	(9.0)	ND	(25)	Duplicate Analysis
255.0000	4/26/85	GRID	COMPOSITE	85ENV186	07/26/85	12-051	ND	(5.9)	10/10/85	13-174	ND	(6.1)	ND	(36)	
255.0000	4/26/85	GRID	COMPOSITE	85ENV186-D	11/11/85	12-244	ND	(1.8)	11/11/85	13-463	ND	(3.7)	17.7		Duplicate Analysis
276.0000	4/25/85	GRID	COMPOSITE	85ENV181	07/26/85	12-051	ND	(5.0)	09/30/85	13-122	ND	(7.1)	ND	(6.6)	
276.0000	4/25/85	GRID	COMPOSITE	85ENV181-D	/ /	-----	-----	-----	10/10/85	13-174	ND	(7.5)	ND	(15)	Duplicate Analysis
3195.0000	5/9/85	IRRIGATION AREA	COMP. OF 8 (0-1')	85ENV254	08/01/85	12-087	238		10/13/85	13-206	1260		13800		
3195.0000	5/9/85	IRRIGATION AREA	COMP. OF 8 (0-1')	85ENV254-D	11/11/85	12-244	209		11/11/85	13-463	818		5450		TCB/TCP/HEX by GC/MS (12-270/13-511)
3195.0000	5/9/85	IRRIGATION AREA	COMP. OF 8 (0-1')	85ENV254-T	11/12/85	12-257	182		11/12/85	13-463	629		4130		Triplicate Analysis
3214.1303	5/29/85	LAGOON AREA	COMP. OF 4 (3-4.5')	85ENV409	08/01/85	12-087	42.2		10/07/85	13-060	103		4730		
3214.1309	5/24/85	LAGOON AREA	COMP. OF 4 (3-4.5')	85ENV319	08/01/85	12-087	177		10/06/85	13-039	1540		31000		
3214.1403	5/29/85	LAGOON AREA	COMP. OF 4 (4.5-6')	85ENV411	08/09/85	12-061	62.7		10/07/85	13-060	243		12600		TCF/HEX ID by GC/MS (13-085)
3214.1409	5/24/85	LAGOON AREA	COMP. OF 4 (4.5-6')	85ENV321	08/01/85	12-087	29.5		10/13/85	13-206	270		12500		